

Reg.



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/783,491	02/14/2001	Shyh-Kwei Chen	YOR920010132	4639

7590 07/02/2004

Robert P. Tassinari, Jr.  
Intellectual Property Law Dept.  
IBM Corporation  
P.O. Box 218  
Yorktown Heights, NY 10598

EXAMINER

HUYNH, THU V

ART UNIT	PAPER NUMBER
----------	--------------

2178

DATE MAILED: 07/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

### Application No.

09/783,491

### Applicant(s)

CHEN ET AL.

### Examiner

Thu V Huynh

### Art Unit

2178

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 14 February 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

### DETAILED ACTION

1. This action is responsive to communications: application filed on 02/14/2001.
2. Claims 1-17 are pending in the case. Claims 1, 9, and 17 are independent claims.

### *Claim Objections*

3. Claims 10-16 are objected to because of the following informalities: The use of "the method of claim 9", "the method of claim 10", and "the method of claim 11" have typographical errors, since claim 9, 10, and 11 are for a system, not a method.

Appropriate correction is required.

### *Claim Rejections - 35 USC § 103*

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

(b) This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. **Claims 1-7 and 9-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hsing et al., US 2002/0023113 A1, priority filed 08/2000 in view of Kenton, US 2002/0035606 A1, provisional filed 05/2000.**

**Regarding independent claim 1, Hsing teaches the steps of:**

Art Unit: 2178

- representing the structural document as a hierarchical tree structure (Hsing, page 2, paragraph 22; representing the XML document as a hierarchy structure wherein each node corresponds to an XML tag);
- receiving translation rules defined with reference to the hierarchical tree structure (Hsing, page 1, paragraph 6; page 3, paragraph 26; page 5, paragraph 42; “When data in the XML document is added, deleted, or modified, the DOM also changes to reflect the modification”); and
- automatically generating a modified hierarchical tree structure representing the structural document in accordance with the translation rules (Hsing, page 5, paragraph 48; updating the DOM to conform to the mutations).

Hsing teaches Document Object Model (DOM) provides an interface for accessing and manipulating an XML document (Hsing, page 1, paragraph 5; and page 2, second column, paragraph 22; DOM having an interface with the XML document such that each said XML tag corresponds to a node in the DOM). However, does not explicitly disclose rules defined by a user.

Kenton teaches user interface provides an intuitive method for generating translation rules (Kenton, page 8, paragraphs 110 and 111).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have combined Keton and Hsing to include a user interface, since this would have allowed users define rules besides predefined rules for accessing and manipulating the DOM tree.

**Regarding claim 2**, which is dependent on claim 1, Hsing and Kenton teach the limitations of claim 1 as explained above. Hsing teaches wherein the translation rules include rules for grouping elements of the structural document (Hsing, page 4, paragraphs 28 and 29; “grouping together all child nodes and branches”).

**Regarding claim 3**, which is dependent on claim 2, Hsing and Kenton teach the limitations of claim 2 as explained above. Hsing teaches wherein the rules for grouping are represented from the group consisting of: diversification of sub-tree tags, and identity of sub-tree tags (Hsing, page 4, paragraphs 28 and 29; grouping nodes having “ID” value of “2”).

**Regarding claim 4**, which is dependent on claim 3, Hsing and Kenton teach the limitations of claim 3 as explained above. Hsing teaches wherein the rules for grouping are represented as a two-column table wherein a first column of the table defines a plurality of nodes in the hierarchical tree structure, and a second column of the table defines a rule to be applied to grouping each of one of the plurality of nodes (Hsing, fig. 4 and page 5, paragraphs 28 and 29; SORTED EVEN TABLE is a table wherein a first column defines a plurality of nodes in DOM, such as node with different ID’s value, and second column defines a rule, such as ADD, DELETE, or MODIFY to be applied to grouping each of plurality nodes).

**Regarding claim 5**, which is dependent on claim 1, Hsing and Kenton teach the limitations of claim 1 as explained above. Hsing teaches wherein the hierarchical tree

Art Unit: 2178

structure is Document Object Model, and structural document to be translated is in a format selected from the group consisting of: flat file and Extensible Markup Language (Hsing, page 2, paragraph 22; and page 3, paragraph 26).

**Regarding claim 6**, which is dependent on claim 1, Hsing and Kenton teach the limitations of claim 1 as explained above. Hsing teaches wherein the step of automatically generating a modified hierarchical tree structure comprises processing each node of the hierarchical tree structure in accordance with the translation rules (Hsing, page 5, paragraphs 48-49; processing the hierarchical tree structure to delete the node having "ID" value of "2"), automatically generating a dynamic table representing an interim translation of hierarchical tree structure and generating the modified hierarchical tree structure from the interim translation (Hsing, abstract and page 2, paragraph 19, updating the DOM tree using created event table which holds events corresponding to each mutation to the XML document).

**Regarding claim 7**, which is dependent on claim 1, Hsing and Kenton teach the limitations of claim 1 as explained above. Hsing does not explicitly disclose wherein the translation rules are generated by the user by means of a graphical user interface that displays to the user various data elements of the structural document represented as nodes in a hierarchical tree structure.

Kenton teaches user interface provides an intuitive method for generating translation rules (Kenton, page 8, paragraphs 110 and 111).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have modified Keton and Hsing to include a user interface that displays to the user various data elements of a DOM tree, since this would have allowed users define rules besides predefined rules for accessing and manipulating the DOM tree.

**Claims 9-15** are for a computer system performing the method of claims 1-7, respectively and are rejected under the same rationale.

**Claim 17** is for a computer system performing the method of claim 8, and is rejected under the same rationale.

**6. Claims 8 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hsing in view of Keton as applied to claim 1 above, and further in view of Carter, US 5,878,419, patented 1999.**

**Regarding claim 8**, which is dependent on claim 1, Hsing and Keton teach the limitations of removing ambiguities from a structural document in claim 1 as explained above. Hsing does not explicitly disclose wherein the ambiguities to be removed from the structural document include data loops that are not marked as loops.

Carter teaches Electronic Data Interchange (EDI) flat file format includes data loops that are not marked as loops (Carter, col.3, lines 2-8 and 18-29; and col.10, line 5 – col.11, line 9, no position tags to indicate the presence of these loops).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have combined Carter and Hsing to removing ambiguities from a

structural document, such as XML and/or EDI flat file, since this would have removed confusing for not only XML document, but also for a flat file which has data loops that are not marked as loops.

**Claim 16** is for a computer system performing the method of claim 8, and is rejected under the same rationale.

### *Conclusion*

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Ho, US 2002/0156814 A1, provisional filed 10/2000, teaches visual business computing.

Chen et al., US 6,68,354 B1, filed 01/1999, teaches automatic display script and style sheet generation.

Claussen et al., US 6,732,330 B1, filed 09/1999, teaches script language blocks to support multiple scripting languages in a single web page.

Schwerdtfeger et al., US 6,725,424 B1, filed 11/1999, teaches electronic document delivery system employing distributed document object model (DOM) based transcodeing and providing assistive technology support.

Chen et al., US 6,507,856 B1, filed 01/1999, teaches dynamic business process automation system using XML documents.

Steve Muench, "XSL Transformations Requirements Version 1.1",  
<http://www.w3.org/TR/2000/WD-xslt11req-20000825>, pages 1-6.



Art Unit: 2178

"Document Object Model Events", <http://www.w3.org/TR/DOM-Level-2-Events/events.htm>, pages 1-29.


8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thu V Huynh whose telephone number is 703-305-9774.

The examiner can normally be reached on Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Heather R Herndon can be reached on 703-308-5186. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TVH  
June 15, 2004



STEPHEN S. HONG  
PRIMARY EXAMINER